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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
| 09/603,323 | 06/26/2000 | Fang Sun | 1179/2/2 | 3143 |
| 29739 SMITH MOORE LLP P.O. BOX 21927 GREENSBORO, NC 27420 | 7590 01/18/2007 | | EXAMINER NUTTER, NATHAN M | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 1711 | |

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| SHORTENED STATUTORY PERIOD OF RESPONSE | MAIL DATE | DELIVERY MODE |
| 3 MONTHS | 01/18/2007 | PAPER |

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

09/603,323

Applicant(s)

SUN ET AL.

Examiner

Nathan M. Nutter

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 November 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 and 20-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 and 20-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 8-00, 10-00, 12-00.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 15 November 2006 has been entered.

Information Disclosure Statement

The information disclosure statement filed 20 December 2006 fails to comply with 37 CFR 1.98(a)(2), which requires a legible copy of each cited foreign patent document; each non-patent literature publication or that portion which caused it to be listed; and all other information or that portion which caused it to be listed. It has been placed in the application file, but the information referred to therein has not been considered.

Regarding the Information Disclosure Statement of 7 August 2000, the references cited as B19, B20, B22, B23, B24, B26, B27, B30 and B40 have not been considered since they are in Japanese with no corresponding Abstract. The corresponding "concise explanation of relevance" for each in the Paper filed therewith is not deemed to show relevance of the documents to the instant invention. For example, the instant invention is titled "Manufacture of Web Superabsorbent Polymer and Fiber," while the references are provided with vague or non-relevant descriptive phrases. As in, B19, "discloses reducing residual monomer in hydrophilic macromolecular polymer",

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B20, "discloses preparation of water-absorbable resin,"

B22, "discloses neutral paper production,"

B23, "discloses cooling material for health or food industry,"

B24, "discloses a water absorbing agent,"

B26, "discloses a wet nonwoven fabric having high uniform water absorbency,"

B27, "discloses granulating highly water-absorbable resins,"

B30, "discloses hydrophilic polymer powder composition for preventing fluidity reduction," and

B40, "discloses a coat layer for writing on synthetic and metal products." The Examiner fails to see the relevance of these documents, which are not provided in English and have no attendant Abstract. Applicants are required to show the relevance of each document cited.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-6 and 20-22 are rejected under 35 U.S.C. 103(a) as obvious over Woodrum (US 5,997,690), taken in view of Akers (US 5,607,550), newly cited.

The reference to Woodrum teaches the production of a web by a wet-laid process that includes an ion sensitive super absorbent polymer (SAP), fibers, and a salt

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dissolved in the water carrier. Note the Abstract and column 2 (lines 46-67). At column 3 (lines 1-13) the reference teaches the polymer as being particulate upon impregnation onto the web, and ion-sensitive, i.e. pre-super absorbent. Note the paragraph bridging column 3 to column 4 for the neutralization of the polymer. The SAP is discussed in depth at column 6 (line 27) to column 7 (line 26), including the surface cross-linking thereof. Further, note column 2 (lines 15-35) which teaches reasons for the manipulation of the ratio of SAP to fiber.

The reference to Akers shows the conventionality of the wet laid slurry process wherein the ratio of superabsorbent polymer to fiber is within the claimed range at 1:99 to 50:50, which embraces the claimed range at 30-40 for the SAP and 60-70 for the fiber. Note the Abstract. The reference shows essentially the same method as recited herein. note column 3 (line 40) to column 4 (line 43) and the Examples.

Both references teach the same essential wet-laid slurry process. Woodrum shows each feature exactly as claimed except the ratio of SAP to fiber included. The reference to Akers teaches that ratio to be conventional, and in view of the teachings of Woodrum at column 2 (lines 15 et seq), a skilled artisan would have reason to employ the ratio of the secondary reference. Nothing unexpected has been shown.

Response to Arguments

Applicant's arguments with respect to claims 1-6 and 20-23 have been considered but are moot in view of the new ground(s) of rejection.

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The response to applicants' arguments with regard to Woodrum are retained and repeated below.

Applicants have alleged, yet failed to show, differences of the instant claims over the reference to Woodrum (US 5,997,690). Both the reference and the instant claims require a wet-laid web. Applicants allege that "Woodrum fails to disclose a water sorptive product including a pre-superabsorbent and a neutralizing agent as set forth in the present claims." This is not so since the reference is clear that a superabsorbent in particulate form is employed, just as recited herein. The neutralizing agent is employed, as well, being the salts disclosed at the paragraph bridging column 3 to column 4, including sodium carbonate, which is disclosed in the instant Specification at the paragraph bridging page 8 to page 9. The identical effect would be realized using the teachings of Woodrum as herein since the same constituents are employed. The order of addition of the constituents, since all are added for the identical reasons to a composition that is identically produced otherwise, is not deemed to be critical, nor has such been shown by applicants. Applicants further allege that "(n)ot only does Woodrum fail to teach a water sorbtive (sic) product including a neutralizing agent, Woodrum at column 4, lines 2-5, teaches including a salt such as sodium sulfate since carbonates have the effect of further neutralizing the SAP. Based on this, Woodrum would teach away from including a neutralizing agent, as required by the present invention." This is not deemed to be precise nor convincing. The reference says "preferred salt" and still includes the carbonates within the definition of suitable neutralizing agents. A reference is taken for the entirety of its teachings, not for any isolated passage used to assert

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patentability. Further, depending on the degree of neutralization desired, a skilled artisan would know to what level the neutralizing salt might be employed suitably.

Further, as of 3 July 2006, applicants contend that the "paragraph bridging columns 3 and 4 does not disclose neutralization of the superabsorbent polymer but discloses "[t]he preferred salt is sodium sulfate because chloride salts contribute to metal stress cracking, and carbonates have the effect of further neutralizing the SAP." Clearly, by this, Woodrum teaches one does not use a neutralizing agent in the water slurry." Applicants words ring hollow since applicants attempt to distort and mischaracterize the full teaching of that passage even as they attempt to differentiate using same. The passage clearly says "(t)he preferred salt is sodium sulfate because... carbonates have the effect of further neutralizing the SAP," which is essentially the concept herein. Carbonates are disclosed as being usable, and will neutralize, as argued by applicants for their own composition. A reference is viewed for the entirety of its teachings, not for isolated phrases that might lend relevance to their otherwise erroneous arguments. Further, applicants have failed to show why the water sorptive composition of Woodrum (swells with the addition of water)). Finally, applicants contend the SAP of Woodrum is not a pre-SAP, which is merely the SAP before neutralization. This is not so in view of patentee's disclosure at column 6 (lines 27 et seq.) which clearly recite polymers that are not neutralized, as well as neutralized and partially-neutralized. Choice of the pre-SAP definition polymers is within the skill of the art, and is shown by the reference itself. Applicants conclusions are based on reasoning using only

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selected passages, and interpretation of passages out-of-context, while ignoring the totality of the reference's teachings.

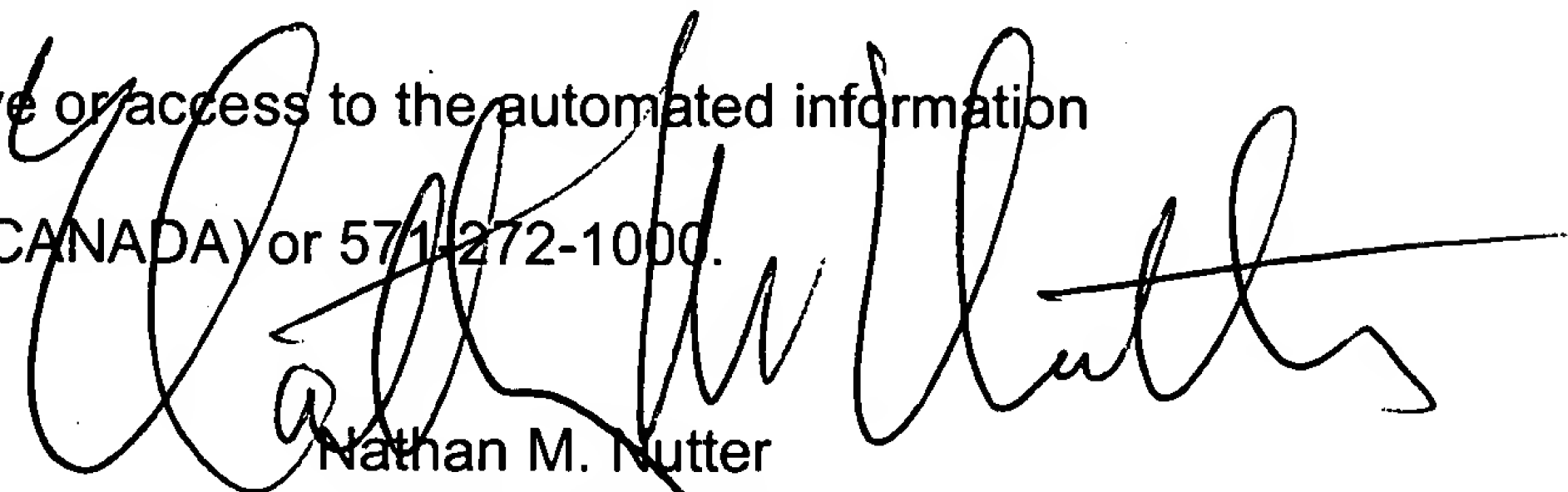
Due to the new ground of rejection, this action is not being made FINAL.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nathan M. Nutter whose telephone number is 571-272-1076. The examiner can normally be reached on 9:30 a.m.-6:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James J. Seidleck can be reached on 571-272-1078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Nathan M. Nutter
Primary Examiner
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nmn

10 January 2007